

Minutes

T11.3 FC-FS-6 ad hoc work group regular meeting 01 February 2021 – 03:00PM – 05:00PM CDT Virtual Conference

The FC-FS-6 ad hoc work group of the Fibre Channel Protocol (T11.3) Task Group held a regular meeting via virtual conferencing using the Zoom platform on 01 February 2021, hosted by Marvell. Attendance was 15 people from 7 organizations and is tabulated at the end of this document.

Minutes were taken by Patty Driever (IBM) (pgd@us.ibm.com). Corrections may be requested either before the subsequent meeting by email to pgd@us.ibm.com or at the subsequent meeting in person.

1 Opening remarks & Introductions

Chairperson Dave Peterson (Broadcom) opened the regular meeting Monday, 01 February 2021 at 03:06 PM CDT. He thanked our host organization, Marvell, for setting up the Zoom meeting and led a round of introductions.

1.1 Attendance and Membership

The chair explained that attendance is recorded electronically at www.incits.org and explained the procedure. Attendance at this meeting does not count toward attendance at the plenaries of T11 and its task groups (i.e., being here will not get you out or keep you out of membership jeopardy). The chair stated that all persons present are considered members of this meeting and may vote on questions, limited to one vote per company present. He advised that although T11 does not limit participation in the activities of its work groups to representatives of T11 member organizations, it requires nonmembers to identify themselves as such. Nonmembers that expect they may participate in the activities of T11 regularly were encouraged to become members.

1.2 Code of Conduct

The chair referenced the INCITS Code of Conduct and suggested everyone become familiar with its content. It can be found on the INCITS website at the following link:
https://standards.incits.org/apps/group_public/document.php?document_id=124850&wg_abbrev=eb

It will be reviewed at the plenary meetings and in all Ad Hoc meetings as well.

1.3 Patents

The chair indicated that among the rules and policies under which this working group operates are the ANSI intellectual property policies as specified in pages 1-3 of http://www.incits.org/pat_slides.pdf. He displayed these pages without comment or explanation, and directed that questions about the policy should be referred to the questioner's legal counsel or the ANSI General Counsel.

1.4 Antitrust

The chair indicated that among the rules and policies under which this working group operates are the INCITS Antitrust Guidelines. Any member of the meeting is responsible for objecting if he believes discussion in the meeting violates those guidelines. As examples, there should never be discussion of the following topics at any INCITS or INCITS subgroup meeting:

- Any company's prices or pricing policies;
- Specific R&D, sales and marketing plans;

- Any company's confidential product, product development or production strategies;
- Whether certain suppliers or customers will be served;
- Prices paid to input sources; or
- Complaints about individual firms or other actions that might tend to hinder a competitor in any market.

If such discussion is not immediately terminated, it is the chairperson's responsibility to terminate the meeting. The INCITS Antitrust Guidelines are available at <http://www.incits.org/inatrust.htm>.

2 Approval of Agenda

An agenda for the FC-FS-6 ad hoc work group regular meeting 01 February 2021 has been posted as T11-2021-00020-v000.

Howard Johnson (Broadcom) moved and Roger Hathorn (IBM) seconded to accept T11-2021-00020-v000 as the agenda for this regular meeting. Approved unanimously.

3 Review of Past Business

3.1 Review of Minutes

Minutes for the FC-FS-6 ad hoc work group regular meeting 07 December 2020 have been posted as T11/2020-00273-v000.

Howard Johnson (Broadcom) moved and Roger Hathorn (IBM) seconded to accept T11/2020-00273-v000 as the minutes of the FC-FS-6 ad hoc work group meeting on 07 December 2020. Approved unanimously.

3.2 Review of Old Action Items

Action Items Carried Forward:

- | | |
|----------------|---|
| 1910-01 | Editor to remove Annex J and any references to it from the next draft version of FC-FS-6 (COMPLETE) |
| 1910-02 | Dave Peterson to work with Howard Johnson on best means to craft diagrams to ensure they can be incorporated by the editor using FrameMaker (COMPLETE) |
| 2008-01 | Editor to incorporate changes noted in 2020-00167-v000 (to mark as obsolete two well-known addresses) (COMPLETE) |

New Action Items Identified Last Meeting:

- | | |
|----------------|--|
| 1912-01 | Editor to incorporate Dave's FC-4 TYPE proposal (T11-2020-00268-v000) into FC-FS-6. (COMPLETE) |
| 1912-02 | Editor to incorporate Howard's proposal T11-2020-00011-v005, 'Congestion Signal Informative Annex Text' into FC-FS-6. (CARRY) |

4 Old Business

4.1 Single Lane 128GFC (2020-00210-v003) Oteyza (Marvell)

Raul reviewed some additional changes he would propose for text related to bit interleaving and symbol forwarding, including alignment marker handling/processing. Raul received more editorial comments to make things more understandable, and to be phrased in proper standard language (e.g. differences in usage of ‘when’ vs ‘if’, where footnotes were needed, etc.).

Raul made a motion, seconded by Roger Hathorn (IBM) to incorporate 2020-00210-v003 as modified into FC-FS-6. Motion was approved unanimously.

4.2 Target Credit Stall – Tying Things Up” – TOV Definition (2021-00013-v000 and 2021-0014-v000) Johnson (Broadcom)

Howard resumed this discussion from prior meetings. He changed the name from ‘Frame Forwarding Timeout Value to ‘Frame Discard Timeout Value’ and made minor changes to the definition. He also added text around R_RDY behavior on frame discards. And as usual, he received some text rewording suggestions.

Howard made a motion, seconded by Roger Hathorn (IBM) to incorporate 2021-0014-v000 as modified into FC-FS-6. Motion carried unanimously.

4.3 End-to-End Encryption Protection Overview (2021-00021-v000) Carlson (Marvell)

Craig presented answers to questions raised in the last review. There was also much discussion about other schemes that could have alternatively been proposed, or even if anything was required as this may be only protection implementation choices, but the focus was primarily on the contents of this proposal.

4.4 End-to-End Encryption Protection Detailed Text (2021-00022-v000) Carlson (Marvell)

Craig presented the text changes required to describe the modified frame contents/format. Craig also indicated that he is not yet ready to propose the means to negotiate use of this modified format...he will come back next time with that.

Craig also pointed out some areas of confusion regarding pieces of text in existing FC-FS-6, including a lack of clarity as to where the text in FC-FS differs from the RFCs referenced.

Craig is not looking for approval of this proposal yet, and instead will give time for folk to review the posted text.

5.0 New Business

5.1

6 Unscheduled Business

6.1

7 Project Schedule

Milestone	Expected Date
Last technical input	June 2021
T11 Letter Ballot	October 2021
Forward to INCITS	TBD

8 Review of Action Items

Action Items Carried Forward:

1912-02 Editor to incorporate Howard's proposal T11-2020-00011-v005, 'Congestion Signal Informative Annex Text' into FC-FS-6.

New Action Items:

2102-01 Raul Oteyza to incorporate comments from February 2021 review into 2020-00210-v003 and upload a new version (v004?)

2102-01 Editor to incorporate Raul Oteyza's proposal on Single Lane 128GFC (T11-2020-00210-v003 as modified) into FC-FS-6.

2102-01 Howard Johnson to incorporate comments from February 2021 review into 2021-00014-v000 and upload a new version (v001)

2102-01 Editor to incorporate Howard Johnson's proposal on Frame Discard Timeout Value (T11-2021-00014-v001) into FC-FS-6.

9 Meeting Schedule

9.1 Next Plenary Week

Request 3 hours for FC-FS-6 at the virtual T11 plenary week 05 April – 08 April 2021.

10 Adjournment

Roger Hathorn (IBM) moved and Howard Johnson (Broadcom) seconded to adjourn. Approved unanimously.

The regular meeting was adjourned at 04:52 PM CDT on 01 February 2020.

11 Attendance

Organization **Representative** **T11.3 Member Company**

BROADCOM LIMITED	Howard Johnson	Y
BROADCOM LIMITED	David Peterson	Y
BROADCOM LIMITED	James Smart	Y
BROADCOM LIMITED	Anil Veerabhadrapa	Y
BROADCOM LIMITED	Steven Wilson	Y
CISCO SYSTEMS INC	Mike Blair	Y
CISCO SYSTEMS INC	Ed Mazurek	Y
CISCO SYSTEMS INC	Ramesh Sivakolundu	Y
HEWLETT PACKARD ENTERPRISE	Barry Maskas	Y
IBM	Patty Driever	Y
IBM	Roger Hathorn	Y
MARVELL SEMICONDUCTOR	Craig W. Carlson	Y
MARVELL SEMICONDUCTOR	Raul Oteyza	Y
NETAPP INC	Frederick Knight	Y
VIAVI SOLUTIONS INC	Jason Rusch	Y